CLAIMS

1. A size composition for the surface sizing of paper, board or other suchlike, the size composition comprising

- a size fraction, such as a surface size known *per se*, the size fraction comprising
  - a water-soluble principal component which is made up of, for example, starch, polyvinyl alcohol, carboxymethyl cellulose, glucomannan, protein, or mixtures thereof, and
- a pigment fraction,

characterized in that

the pigment fraction is formed by mixing together

- a mineral substance, which mainly comprises talc particles and/or other phyllosilicate particles, and
- a binder, such as a synthetic polymer, latex and/or other corresponding binder,

and that

the size composition is prepared by mixing together the said size fraction and pigment fraction.

2. A size composition according to Claim 1, **characterized** in that the size composition is prepared by mixing the ready-mixed pigment fraction into the size fraction.

3. A size composition according to Claim 1, **characterized** in that the size composition is prepared by mixing the size fraction into the ready-mixed pigment fraction.

4. A size composition according to Claim 1, **characterized** in that the size fraction comprises in addition to a water-soluble principal component one or more additional components, such as a mineral material, a hydrophobification agent, an anti-foaming agent, and/or salts.

5. A size composition according to Claim 1, **characterized** in that the principal component of the size fraction is starch, polyvinyl alcohol and/or carboxymethyl cellulose.

6. A size composition according to Claim 1, **characterized** in that the mineral material of the pigment fraction is phyllosilicate having a purity degree of 90 – 100 % and a particle size of 90 % below 40 µm.

7. A size composition according to Claim 1, **characterized** in that
   - the mineral material of the pigment fraction comprises talc particles, and that
   - the proportion of talc particles of the mineral material is at least 50 %, typically >90 %.

8. A size composition according to Claim 1, **characterized** in that
   - the mineral material of the pigment fraction comprises talc particles, and that
   - the proportion of talc, calculated as dry matter of the amount of the pigment fraction is >10 %, typically >30 %, most typically >50 %.

9. A size composition according to Claim 8, **characterized** in that the proportion of talc is <95 %, typically <85 %, most typically <70 %, of the amount of the pigment fraction.

10. A size composition according to Claim 1, **characterized** in that in the size composition the ratio of the pigment fraction to the size fraction, calculated as dry matter, is 10/90 – 90/10, typically 20/80 – 80/20, most typically 20/80 – 50/50.

11. A size composition according to Claim 1, **characterized** in that the binder in the pigment fraction is a synthetic polymer, such as styrene butadiene, acrylate, styrene acrylate or polyvinylacetate latex.

12. A size composition according to Claim 1, **characterized** in that the binder in the pigment fraction is
   - a polymer which contains styrene or butadiene as its principal component,
   - a polymer which contains as its principal components monomers which contain an acryl or allyl group, said monomers being, for example
     - an n-, iso- or tert-alkyl ester of acrylic or metacrylic acid, where the alkyl group comprises 1 – 20 carbon atoms,
     - a diester of acrylic or metacrylic acid and ethylene or propylene glycol (as a crosslinking component)
     - allylglycidyl ether or diacetone acrylamide (as a crosslinking component), or
     - 2-acrylamido-2-methylpropane sulfonic acid (as an ionicity-increasing component),

and which monomers may additionally contain acid or ester groups, or they may be amides of acrylic or metacrylic acid or derivatives thereof,

and/or

- a polymer which contains as its principal components vinyl ester monomers, such as vinyl acetate, vinyl propionate, vinyl butyrate, vinyl benzoate, vinyl-2-ethyl hexanoate, vinyl stearate and vinyl ester of versatinic acid.

13. A size composition according to Claim 1, **characterized** in that the binder used in the pigment fraction is a biodegradable compound, which biodegradable compounds may be

- polymers based on starch, lactic acid and polyhydroxybutyrate/valerate or
- polyesters of various organic di- or tri-acids with alcohols having functionality of two or higher, in which case the said acids may be, for example, adipic, maleic and citric acid, and the alcohols may be, for example, ethylene, propylene and neopentyl glycol, as well as pentarythritol and glycerol.

14. A size composition according to Claim 1, **characterized** in that the binder in the pigment fraction comprises a graft copolymer of a starch and a synthetic monomer.

15. A size composition according to Claim 1, **characterized** in that before the mixing together of the size fraction and the pigment fraction a hydrophobification agent is added to the pigment fraction in such an amount that the desired absorption of liquids is achieved in the surface-sized paper or the like.

16. The use of a size composition according to Claim 1, **characterized** in that a layer of 0.5 – 3 g/m^2 of a size having the size composition is applied to the surface of paper or the like in the surface sizing unit or coating unit of a paper machine or the like.